

What is Claimed is:

1. A method of detecting a redirecting process in the course of a bi-directional non-contact making transmission of data between a first transmitting and receiving unit and a second transmitting and receiving unit wherein the first transmitting and receiving unit transmits an interrogation signal, the value of the amplitude (A1) of the received interrogation signal is measured by the second transmitting and receiving unit, the measured value of the amplitude (A1) is transmitted back in a reply signal, and the value of the amplitude (A2) of the received reply signal is measured by the first transmitting and receiving unit and compared with the returned value of the amplitude (A1).
2. A method in accordance with Claim 1, wherein a predetermined value is assigned to a redirection indicator in dependence on the result of the comparison.
3. A method in accordance with Claim 1 or 2, wherein the measured value (A1) of the amplitude is transmitted in encoded form with the reply signal.
4. A method in accordance with Claim 3, wherein the comparison is carried out within a predefined time window which begins at the beginning of the transmission of the interrogation signal.
5. A method in accordance with any preceding Claim, wherein the first transmitting and receiving unit additionally compares the frequency (F2) of the interrogation signal with the frequency (F21) of the reply signal.
6. A method in accordance with Claim 5, wherein a check is made by the first transmitting and receiving unit as to whether the carrier frequency is present, without interruption, from the transmission of the interrogation signal until the reception of the reply signal.
7. A method in accordance with Claim 5 or 6, wherein the comparison of the amplitude values (A1, A2) and the comparison

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of the frequencies (F1, F21) is carried out simultaneously with the checking of an identification code.

8. A method of detecting a redirecting process substantially as herein described with reference to each of the accompanying drawings.

9. The use of the method in accordance with any preceding claim for detecting unauthorised redirection of an authentication process employed in motor vehicles.

10. A system for detecting a redirecting process substantially as herein described with reference to each of the accompanying drawings.